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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,314	06/27/2001	Phillip B. Blankenship	KOCH.84166	2106

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EXAMINER

FLETCHER III, WILLIAM P

ART UNIT	PAPER NUMBER
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1762

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 09/893,314	Applicant(s) BLANKENSHIP ET AL.	
	Examiner William P. Fletcher III	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. The finality of the Office action mailed December 21, 2004 is withdrawn and prosecution is reopened.
2. The Examiner has reconsidered Appellant's arguments filed in the Brief of April 18, 2005, in light of the Board's comments in the Remand of March 30, 2006. It is clear that the record, to-date, lacks adequate evidence of a stability test (in particular, a Hveem Stability Test) and a fatigue test (in particular, a Flexural Beam Fatigue Test) as part of the mix design for an asphalt roadway. This action furnishes such evidence.
3. All rejections set-forth in prior Office actions are withdrawn in favor of those set-forth herein below.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 37-45 and 50-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helf (US 6,248,396 B1) in view of Harvey et al. (*Fatigue Performance of Asphalt Concrete Mixes and Its Relationship to Asphalt Concrete Performance in California*, Oct. 1995).**

A. Helf teaches a method of making an asphalt interlayer for a roadway [8:54-9:4]. The method includes the application of an asphalt mixture comprising a polymer-modified binder and aggregate [2:35-7:23]. The method further comprises: selecting an aggregate, selecting an asphalt, and selecting a polymer [2:35-47]; heating the asphalt to between about 150°C and 200°C [7:5-15]; adding the polymer to the asphalt to form a binder; stirring the binder until said polymer is substantially dissolved; stirring the binder until a substantially homogeneous binder is formed; mixing the binder with the aggregate to form an interlayer [7:55-57]; and spreading the interlayer on the roadway. Helf also teaches the addition of cross-linking agents [5:65] and the high viscosity of the binder reads on low shear blending conditions. Helf additionally teaches the overlay [8:55-63]. As the mixture may be used as an interlayer or may be the top layer, this reads on allowing traffic to drive on the interlayer.

B. While Helf clearly teaches that the flexibility of the asphalt mixture is of concern in the invention [8:6-10, 27-52, and 63-66], and while it has been established on the record that stability and fatigue testing is known in the art, Helf does not explicitly state that stability and fatigue tests are performed on the

asphalt mixture and that said tests are used to select an appropriate asphalt mixture.

C. Harvey teaches that both stability testing and fatigue testing — in particular, the Hveem Stability Test (HST) and the Flexural Beam Stability Test (FBST) — are known in the art as tests performed during asphalt mix design and describes the role of these tests in the process of formulating and selecting an asphalt mixture suitable for a given application [xvi:12-17; 1:3-5 and 8-9; 2:9-12, 17, 18, and footnote; 3:1-2, 13-15, 17-18, and 23-4:1; 8:1-4; 18:1-2, 4-6, and 9-11; 54:17-55:1; 76:22-77:2; 77:9-12; 78:7-9 and 12-14].

D. Consequently, it would have been obvious to one of ordinary skill in the art to modify the process of Helf so as to utilize stability and fatigue testing — in particular HST and FBST — as part of the mix design to determine the best formulation suitable for the give asphalt interlayer application.

E. Further, it is clear that those test results that are deemed suitable depend upon the desired environment and application. For a given environment and application, it would have been obvious to optimize the proportions of asphalt constituents to achieve the desired durability, etc. Consequently, it would have been obvious to one of ordinary skill to optimize the asphalt mixture by routine experimentation, absent evidence of criticality. See MPEP 2144.05.

F. Finally, Harvey teaches many of the claimed measurements as part of the mix design process. It is the examiner's position that such measurements are common and well-known in asphalt mix design.

7. Claims 46, 47, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helf in view of Harvey et al., as applied to the claims above, further in view of Walter (US 3,907,582 A).

- A. The combined teaching of Helf and Harvey is detailed above.
- B. As noted previously in the record, Walter teaches cooling between layers and forming an overcoat with a thickness of 1 inch [4:41].
- C. It would have been obvious to one of ordinary skill in the art to modify the process of Helf in view of Harvey so as to utilize such a thickness. One of ordinary skill would have been motivated to do so by the desire and expectation of successfully providing a road overlay.

8. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Helf in view of Harvey et al. and Walter, as applied to claim 45 above, further in view of McDonald (US 3,891,585 A).

- A. The combined teaching of Helf and Harvey is detailed above.
- B. Neither of these references teaches sweeping the roadway and sealing cracks prior to applying the interlayer.
- C. As noted previously in the record, McDonald teaches sweeping the roadway and seal the cracks prior to forming an asphalt/polymer layer thereon [9:18-41]. This is done so that underlying fatigue cracking is not reflected in the new layer [7:12].
- D. Consequently, it would have been obvious to one of ordinary skill in the art to modify the process of Helf in view of Harvey so as to sweep the roadway and

seal the cracks. In so doing, underlying fatigue cracks are not reflected in the new layer.

Conclusion

9. The prompt development of clear issues in the prosecution history requires that applicant's reply to this Office action be fully responsive (MPEP § 714.02). When filing an amendment, applicant should specifically point out the support for any amendment made to the disclosure, including new or amended claims (MPEP §§ 714.02 & 2163). A fully responsive reply to this Office action, if it includes new or amended claims, must therefore include an explicit citation (i.e., page number and line number) of that/those portion(s) of the original disclosure which applicant contends support(s) the new or amended limitation(s).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Monday through Friday, 0900h-1700h.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1762

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



William Phillip Fletcher III
Primary Examiner
Art Unit 1762

January 19, 2007